UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/647,595	08/25/2003	S. Brandon Keller	100111227-1	2409

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EXAMINER
PATEL, SHAMBHAVI K

ART UNIT	PAPER NUMBER
2128	

DATE MAILED: 10/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/647,595	KELLER ET AL.
	Examiner	Art Unit	
	Shambhavi Patel	2128	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>25 August 2003</u>.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-20</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-20</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>25 August 2003</u> is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

        1. ☐ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____.

        3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Claims 1-20 are pending.

Information Disclosure Statement

1.   The information disclosure statements (IDS) submitted on 01/17/2006, 12/01/2005, 06/08/2005,

01/20/2005, and 02/06/2004 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the

Examiner has considered the IDS' as to the merits.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2.   **Claims 1-20 are rejected under 35 U.S.C. 101** because the claimed invention is directed to non-

statutory subject matter.

Regarding claims 1, 9, 13, 15 and 18, *the Examiner asserts that the current state of the claim*

language is such that a reasonable interpretation of the claims would not result in any useful, concrete or

tangible product. Generating a list including configuration information (claims 1, 9 and 18), applying a

list of configuration commands to a net (claim 13), and instructions to apply the configuration commands

to a net (claim 18) does not produce a tangible result.

Regarding claims 1, 9, 13, 15 and 18, the Examiner asserts that the claims do not indicate if the

methods or apparatus are tangible methods or apparatus in the form of hardware, instead of an

arrangement of software lacking tangible embodiment. Though a list including configuration information

is generated, the results are not outputted to a file or displayed. It fails to use or make available for use the

result of the determination to enable its functionality and usefulness to be realized.

All other claims are rejected by virtue of their dependency.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis

for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3.   **Claims 1, 3, 7, and 8 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by**

DenBraber (US Patent No. 7,039,893).

Regarding claim 1:

Denbraber discloses a method for determining applicable configuration information for use in

analysis of a computer aided design, comprising:

a.   generating a state machine using information contained in a plurality of configuration

commands **(column 7 lines 1-3).** An array of configuration data is created for each finite

state machine, and this configuration data is used to create a new implementation of a

FSM. This is done with the void fsm_init function **(column 7 lines 49-51)**

b.   applying a design element name, associated with a design element, to the state machine

(column 10 lines 65-67 *<state machine name>_fsm_input.c contains the allocation of*

the state machine input work variable (design name)) and generating with the state

machine a list including configuration information applicable to the design element

(column 12 lines 24-30). Each state machine has a unique configuration structure that is allocated and populated with configuration data by the state machine engine.

Regarding claims 3, 7 and 8:

Denbraber is directed to the method of claim 1, including the step of applying the configuration commands to at least one net in the design, wherein the design element name is associated with a net in the design (netlist) **(column 6 lines 56-59; column 10 lines 65-67; column 12 lines 24-30).** The net in the instant application is interpreted to be analogous to the state machines that are configured by the machine engine in the prior art.

Allowable Subject Matter

Claims 2 and 4-6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 9-20 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 101, set forth in this Office action.

The following is an examiner's statement of reasons for allowance:

Regarding claim 9:

Applicant is disclosing a system for determining applicable configuration information for use in analysis of a computer aided design, comprising a file containing a plurality of configuration commands for setting values associated with nets in the design, a netlist containing a plurality of net names, each of which is associated with one of the nets, and a processor. The Examiner notes that the term 'configuration

command' is interpreted in light of paragraph [003] of the specification. This is disclosed in the prior art made of record.

The prior art of record does not teach "a state machine, executed by a processor, that is compiled using information contained in a plurality of configuration commands, wherein, in response to input comprising one of the net names, the state machine generates a list including configuration information applicable to one of the nets corresponding to the input".

Furthermore, the prior art of record does not meet the conditions as suggested in MPEP section 2132, namely:

"The identical invention must be shown in as complete detail as is contained in the ... claim." Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim, but this is not an **ipsissimis verbis** test, i.e., identity of terminology is not required. **In re Bond**, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990)."

In particular, the prior art of record does not disclose the specific combination of system elements inclusive of " a file containing a plurality of configuration commands for setting values associated with nets in the design; a netlist containing a plurality of net names, each of which is associated with one of the nets; a processor; and a state machine, executed by the processor, that is compiled using information contained in a plurality of configuration commands, wherein, in response to input comprising one of the net names, the state machine generates a list including configuration information applicable to one of the nets corresponding to the input", as now recited in independent claim 9.

Dependent claims 10-12 are deemed allowable as depending from independent claim 9.

Regarding claim 13:

Applicant is disclosing a method for determining applicable configuration information for use in analysis of a computer aided design, comprising generating a state machine using information contained

in a plurality of configuration commands, wherein, in response to input comprising a net name associated

with a net in the design, the state machine generates a list including configuration commands applicable

to the net, applying a net name, associated with the design, to the state machine to generate the list, and

applying the configuration commands in the list to at least on of the nets in the design. The Examiner

notes that the term 'configuration command' is interpreted in light of paragraph [003] of the specification.

This is disclosed in the prior art made of record.

The prior art of record does not disclose "wherein the state machine is compiled by determining,

from a set of regular expressions associated with the configuration commands, a set of states and

transitions between the states that are matched against characters of the net name to determine zero or

more regular expressions that match the net name, wherein any of the regular expressions thus determined

have associated therewith one or more corresponding configuration commands applicable to the net

name; wherein each of the configuration commands includes a command type field indicating the type of

entity to which the command is applicable, and a value field indicating the value to which the net

corresponding to the net name is to be set".

Furthermore, the prior art of record does not meet the conditions as suggested in MPEP section

2132, namely:

"The identical invention must be shown in as complete detail as is contained in the ... claim."

Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The

elements must be arranged as required by the claim, but this is not an **ipsissimis verbis** test, i.e., identity

of terminology is not required. **In re Bond**, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990)."

In particular, the prior art of record does not disclose the specific sequence of method steps

inclusive of "generating a state machine using information contained in a plurality of configuration

commands, wherein, in response to input comprising a net name associated with a net in the design, the

state machine generates a list including configuration information applicable to the net; wherein the state

machine is compiled by determining, from a set of regular expressions associated with the configuration commands, a set of states and transitions between the states that are matched against characters of the net name to determine zero or more regular expressions that match the net name, wherein any of the regular expressions thus determined have associated therewith one or more corresponding configuration commands applicable to the net name; wherein each of the configuration commands includes a command type field indicating the type of entity to which the command is applicable, and a value field indicating the value to which the net corresponding to the net name is to be set; applying a net name, associated with the design, to the state machine to generate the list; and applying the configuration commands in the list to at least one of the nets in the design" as now recited in independent claim 13.

Dependent claim 14 is deemed allowable as depending from independent claim 13.

Regarding claim 15:

Applicant is directed to a system for determining applicable configuration information for use in analysis of a computer-aided design. This is disclosed in the prior art of record.

The prior art of record does not disclose "means for generating a state machine using information contained in a plurality of configuration commands, wherein, in response to input comprising a design element name associated with a net in the design, the state machine generates a list including the configuration information applicable to the net; and means for applying the design element name to the state machine to generate the list".

Independent claim 15 further uses "means for" language and is given deference in view of In re Donaldson and interpreted in view of 35 U.S.C. 112 paragraph 6. The "means for" language and the limitations related thereto of claim 35 are interpreted within the scope of enablement as provided within the relative embodiment provided within applicant's specification. In particular, the specific means for limitations as recited in the claims is interpreted as defined by the specifications as follows:

     i.   means for generating a state machine using information contained in a plurality of configuration commands, wherein, in response to input comprising a design element name associated with a net in the design, the state machine generates a list including the configuration information applicable to the net ([0019]-[0020]). The Examiner notes that the term 'configuration command' is interpreted in light of paragraph [003] of the specification

     ii.   means for applying the design element name to the state machine to generate the list ([0021]))

Furthermore, the prior art of record does not meet the conditions as suggested in MPEP section 2132, namely:

"The identical invention must be shown in as complete detail as is contained in the ... claim." Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim, but this is not an **ipsissimis verbis** test, i.e., identity of terminology is not required. **In re Bond**, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990)."

In particular, the prior art of record does not disclose the specific combination of system elements inclusive of "means for generating a state machine using information contained in a plurality of configuration commands, wherein, in response to input comprising a design element name associated with a net in the design, the state machine generates a list including the configuration information applicable to the net; and means for applying the design element name to the state machine to generate the list" as now recited in independent claim 15.

Dependents claim 16-17 are deemed allowable as depending from independent claim 15.

Regarding claim 18:

Applicant is directed to a software product comprising instructions, stored on computer-readable media, wherein the instructions, when executed by a computer, perform steps for determining applicable configuration information for use in analysis of a computer aided design, comprising: instructions for generating a state machine using information contained in a plurality of configuration commands. The Examiner notes that the term 'configuration command' is interpreted in light of paragraph [003] of the specification. This is disclosed in the prior art made of record.

The prior art of record does not disclose "wherein, in response to input comprising a net name associated with a net in the design, the state machine generates a list including the configuration information applicable to the net; instructions for applying a net name, associated with the design, to the state machine to generate the list; and instructions for applying the configuration commands in the list to at least one net in the design".

Furthermore, the prior art of record does not meet the conditions as suggested in MPEP section 2132, namely:

"The identical invention must be shown in as complete detail as is contained in the ... claim." Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim, but this is not an **ipsissimis verbis** test, i.e., identity of terminology is not required. **In re Bond**, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990)."

In particular, the prior art of record does not disclose the specific sequence of instructions that perform the method steps inclusive of "generating a state machine using information contained in a plurality of configuration commands, wherein, in response to input comprising a net name associated with a net in the design, the state machine generates a list including the configuration information applicable to the net; applying a net name, associated with the design, to the state machine to generate the list; applying the configuration commands in the list to at least one net in the design"

Dependent claim 20 is deemed allowable as depending from independent claim 19.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shambhavi Patel whose telephone number is (571) 272-5877. The examiner can normally be reached on Monday-Friday, 8:00 am – 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamini Shah can be reached on (571) 272-2279. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SKP

KAMINI SHAH
SUPERVISORY PATENT EXAMINER